

ABSTRACT OF THE DISCLOSURE

Provided is a method for operating a NOR-type flash memory device using SONOS cells. The SONOS cells are selectively programmed using channel hot electron injection and
5 erased using Fowler-Nordheim tunneling and hot hole injection. When the SONOS cells are
programmed, a voltage within a range of 8V – 12V is applied to a selected word line and a
voltage within a range of 3V – 6V is applied to a selected bit line. When the SONOS cells
are erased, the selected word line is ground and a voltage within a range of 13V – 18V is
applied to a substrate. Alternatively, a voltage of about –8V is applied to the selected word
10 line, a voltage of about 6V is applied to the substrate, and a bit line and a source line float.